Ace Education Company, a designer, producer, and distributor of training materials, is currently suffering from rising costs and slow sales. A number of factors are contributing to this situation, but the action the top management of the company has decided to take is to reorganize the company.

Reorganization or restructuring a company or organization usually means changing the distribution and assignment of work to different people, changing the reporting relationships of people and functions, and usually changing some of the individuals who manage key functions. The change manifests itself most graphically in a change in the organization chart or table of organization of the institution, which shows the names and reporting relationships of people and departments or work units.

Reorganization is the most common and frequent response of management to a performance problem. Unfortunately, the majority of reorganizations tend to be unsuccessful in that they don't achieve their goal of improved performance.

Reorganization or restructuring is, indeed, a powerful tool for improving organization and individual performance. However, in order for this intervention to have the impact it can and should, it should be seen as one of organization redesign, not the whimsical changing of management personalities and reporting relationships.

The area of organization design, redesign, structure, and so forth is a broad field of literature and endeavor, ranging from theories of how to design to strategies for implementation. This chapter will present a brief summary of some of the issues involved in organization design and a process for carrying out an organization redesign. We will use the case of Ace Education to illustrate the process of redesign.
ORGANIZATION REDESIGN

According to Funk and Wagnalls, an organization is “a number of individuals systematically united for some end or work.” Organization redesign is concerned with changing the assigned goals, responsibilities, and reporting relationships within a given organization.

But why reorganize or redesign? Rationally, an organization should be redesigned to improve the performance of the organization (an assumption we make for this chapter). There are two primary performance criteria for choosing to redesign an organization or part of an organization:

1. **Responsiveness**: the ability to respond, to produce whatever product or service the organization is expected to produce.

   The issue could be (a) the appropriateness or quality of response, and/or (b) the speed of the response.

2. **Resource utilization**: the ability to produce the required products or services with fewer resources.

   For example, a growing organization with a central corporate training function must decide whether to develop satellite training functions in each of its major divisions. The satellite training operation will be more responsive to the training needs of the division in which it is located. However, this will be a more costly set-up because certain resources and capabilities that were centralized in the corporate training function are now duplicated to some degree in each of the division training functions. Most organization redesign efforts are a trade-off between these two factors: responsiveness and resource utilization.

As we discuss ways of approaching organization redesign, several realities of organization redesign should be kept in mind:

- A reorganization is seldom perfect. There are compromises, trade-offs between responsiveness and resource utilization objectives, accommodations to available staff to carry out the assignments, and the “politics” of what one has the power or ability to carry out in an organization.

- It takes an enormous amount of time to completely implement all but the simplest organization redesigns. It is questionable how many reorganizations are ever fully implemented as envisioned by their architects. And reorganizations always take longer to get beyond the surface changes to the gut changes critical to achieving the desired organization performance. Implementation of a redesign is a process, not an event.

- Implementing a reorganization can be very disruptive to the organization. However, it is beyond the scope of this chapter to treat implementation strategies in depth.
TWO VIEWS OF ORGANIZATIONS

Two views of organizations are important when considering organization redesign:

1. The first view—organization structure—describes the functions of an organization and their reporting relationships. This is the most common view of organizations (see Figure 15–1A) and is the format ultimately used within and without the organization, to communicate who is responsible for what.

2. The second view—organization “map” or System Flow—describes how the work gets done (the relationship between work and the organization functions). This view of an organization is less common, but is critical if we are serious about redesigning (emphasis on design versus arbitrary) an organization to improve performance. In addition, the organization system view (see Figure 15–1B) is increasingly necessary and useful to supplement the classic organization structure view in communicating who does what work.

Each of these views will be discussed briefly prior to describing an approach to redesigning an organization.

View One: Organization Structure

The organization chart or table of organization, Figure 15–2, shows the organization structure of Ace Education Company. This represents the classic way we think of and describe organizations. It shows us that there are five functions reporting to the president, that there are two major components of the administrative function, and so on.

Guidelines for Organization Redesign

Regarding this dimension or view of organizations there are several guidelines that have been developed regarding organization design or redesign.

Span of Control

One criterion for evaluating an organization structure is the span of control, which refers to the number of functions or people a manager has reporting to him or her. (The president in Figure 15–2 has a span of control of five.) The prevailing wisdom says that one's span of control should not exceed six or seven. Also, there should not be any one-on-one reporting relationships, or a span of control of one. In reality, the appropriate span of control varies with the complexity of a given business and the organization functions, the sophistication of the management information system available to the manager, and the experience of the manager.
A. ORGANIZATION STRUCTURE VIEW

Figure 15-1. Two views of an organization.

R & D (PRODUCT DEVELOPMENT)  MANUFACTURING  MARKETING & SALES
Figure 15–2. Organization chart of Ace Education Company.

Organization Depth

A second area of concern is the organization depth, (how “deep” the reporting relationships are), or how many layers exist between the top and bottom manager in an organization. Again, a guideline is a maximum of four to six layers of management between a president or general manager and a first-line supervisor. And again, this varies with the type of business.

Basic Organization Structures

There are also some basic organization structures that have evolved, each an attempt to deal with the balance between responsiveness and resource utilization. Three basic organization structures are:

The Functional Organization

The functional organization is structured by basic functional subunits, such as Sales/Marketing, Manufacturing, Research and Development, Finance, and so on. Ace Education, as shown in Figure 15–2 is organized functionally.
The Divisional Organization

The *divisional organization* is structured by operating divisions. However, each division is then organized by functions. The divisions usually represent different markets or product lines.

If Ace Education were organized divisionally, the structure would look like that shown in Figure 15–3.

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![Diagram of Ace Education's divisional structure]

**Figure 15–3.** Divisional structure of Ace Education Company.

Matrix Organization

The *matrix* is a hybrid. It combines a basic functional structure with a product or market orientation.

If Ace Education were set up as a matrix organization, it would operate as shown in Figure 15–4. A program (in the program development division) would usually involve a product or series of products that a program manager coordinates or "drives" through the functional organization. This design is said to be a matrix organization because a manager in any of the functions (e.g. product development) must meet functional goals as well as program goals. This design is usually a result of trying to conserve resources—that is, it doesn't make economic sense to have a product development function, a manufacturing function, and so on dedicated to each program or product line.
The Organization Structure and Organization Redesign

In reality, a large organization is usually a combination of all three of these basic structures.

As we mentioned earlier, the organization structure is one view of an organization. It is the view or format we will use to communicate who is responsible for what in an organization. However, this view doesn't adequately denote the dynamic nature of organizations and organization structure. It supports the popular conception that organizations are static when they are in fact dynamic, constantly changing. This can inhibit important thinking about how and why to redesign an organization.

To think through how best to redesign an organization to balance responsiveness and resource utilization, it is helpful to also use the organization system flow view.
View Two: The Organization System

Organizations have a second dimension, the system flow, that is important to consider when redesigning or restructuring. As shown in Figure 15–1B, this dimension has to do with understanding how work is to be done by the organization. In this view, we go behind the structure to look at how the organization gets the work done.

The Organization as an Adaptive Processing System

The system flow view of organizations is based on the premise that organizations behave as adaptive processing systems. That is, they take in input (material, information, capital, labor), process them, and produce some output (product or service) for some receiving system or market, as shown in Figure 15–5A. The processing system or organization changes its output based on two primary sources of feedback: Feedback Loop I tells the organization how well its outputs measure against its internal standards, and Feedback Loop II tells the organization what the receiving system or marketplace thinks of the output. The presence of Feedback Loop II allows the organization to adapt to market needs, to adapt to its environment.

Figure 15–5B shows Ace Education as an adaptive processing system. It converts subject matter, paper, capital, and sales orders into training materials. Its performance will be guided by the feedback (Loop I) it gets on such internal measures as cost per unit and on-time delivery. However, as an organization, it will adapt—change its products and even the nature of its business—based on the critical feedback (Loop II) of revenue.

In general, any organization can be viewed in the systems context shown in Figure 15–6. The business organization exists to provide a product or service to a market. In most cases, there is competition for both the market and the raw materials to produce the outputs. And this entire adaptive scenario is played out within the larger system influence of government, the economy, culture, and so on.

If we look inside the organization as a system as illustrated in Figure 15–7, we see the subsystems (pairs of processing systems and receiving systems) that get the work done.

Figure 15–7 contains a general model of the major subsystems and inputs/outputs for a classic “Smokestack America” company. We know that these major inputs/outputs (and hundreds of minor ones) must be flowing between the key subsystems if this—or any—organization is going to produce its products and service to meet its internal goals and to be responsive to a continually changing marketplace. (Current newspaper headlines are a constant reminder of the economic and social consequences of organizations failing to do that.)
Figure 15-5A. An adaptive system model.
Figure 15-5B. Ace Education as an adaptive system.
Figure 15–6. The system context of organizations.

The essence of organizational design is the effectiveness (i.e., responsiveness) and efficiency (i.e., utilization of resources) of this organizational system, as pictured in Figure 15–7.

The Organization System and Organization Redesign

The organization system view has some important implications for organization redesign. First, it provides a conceptual model for approaching the task of reorganization. The goal of a redesign is organization responsiveness and the efficient utilization of resources. This translates into organization system effectiveness and efficiency. Thus, the starting point of organization redesign is to design the optimal organization system (the flow of inputs/outputs between subsystems). The next step is to draw the subsystem boundaries, which would then determine the reporting relationships and organization structure. Form (organization structure) follows functions (organization system).

A second benefit of the organization system view is the tool it provides for literally drawing or "modeling" an organization so that alternative system flows
Figure 15-7. Organization subsystems.

and reporting relationships can be systematically examined and evaluated. For example, Ace Education's current organization can be modeled or "mapped" as shown in Figure 15-8.

Finally, this modeling or mapping tool can be used to communicate how an organization redesign is going to work. People can be presented with a map of the new organization system as well as participate in the design of the map at certain levels of the organization. The result is a substantial understanding of who does what in the "new" organization.
Figure 15-8. System flow (map) view of Ace Education Company.
A PROCESS FOR REDESIGNING AN ORGANIZATION

Given this background on the two views of organizations, let's now look at how this forms a process for organization redesign.

Remember Ace Education Company with a need to reorganize in order to counter rising costs and slow sales? How does one go about actually redesigning an organization like this? Let's see.

Although the world is a long way from having a technology of organization redesign, there are a number of different approaches to the topic (see Bentley, 1984; Donaldson, 1985; Drazin & Howard, 1985; Kimberly, 1984; Littler & Sweeting, 1984; Lorsch, 1982; Mackenzie, 1985; Organizational Research & Consultation, 1983; Pitts & Daniels, 1984). To illustrate the process of redesign, we will use an approach based on the two views of an organization described earlier. The process we will follow has these steps:

1. Analyze the need for redesigning the organization.
2. Model the current organization as a system, showing the work that is done by all key functions.
3. Develop alternative work flow models of the organization system (organization maps), reflecting acceptable work processes.
4. Determine function boundaries on the organization map, to facilitate the information flow and decision-making to optimize work flow and resource utilization.
5. Determine system or organization measures and goals.
6. Determine function and job responsibilities, measures, and goals.

Now let's apply this 6-step process to the redesign of Ace Education Company.

STEP 1. Analyze the Need for Redesigning the Organization

What are the performance issues that suggest a redesign? The answer is usually a problem of the organization's responsiveness or resource utilization.

Ace Education designs, produces, and markets training materials, and is organized as shown in Figure 15-9.

As the product line of Ace Education matured, the company lost market share. Ace has introduced only two new products in the last 5 years. Both products cost more to develop and produce than budgeted, and both have sold substantially less than projected. A new corporate strategy calls for the introduction of a series of new products at the rate of two a year for the next several years. The challenge is to redesign the organization to support the new strategy—the efficient and cost effective design, production, and marketing of products to meet their sales projections.
Figure 15-3. Organization chart of Ace Education Company.

STEP 2. Model the Current Organization as a System, Showing the Work That Is Done by All Key Functions

First, a "macrolevel" model (system flow) of Ace Education was developed (as shown in Figure 15-8). Next, current issues or performance problems in the Ace system flow relating to the design, production, and marketing of new products were indicated on the model (see Figure 15-10).


A map or system flow of the ideal or desired process for developing and introducing a new product was developed. A portion of this more detailed level of flow appears in the chart in Figure 15-11. In this chart, each key organization function is represented by a horizontal "band." The new product development flow starts with the "*" and generally moves from left to right across the function bands. This chart shows, ideally, what each function must accomplish and when, if a new product is to be successfully launched. The major differences between this flow and that shown in Figure 15-10 is the
Figure 15-10. Macro organization map and disconnects of Ace Education Company.

KEY TO CURRENT ISSUES IN ACE SYSTEM

1. No market research to suggest new product ideas forwarded from Marketing to Product Development.

2. No input to Marketing from Field Operations (sales and technical support) on new product ideas and requirements.

3. No input to Sales on projected market to assist in making realistic sales forecast for new products.

4. Inadequate training of the sales force and tech support in new products.

5. Product development tends to unilaterally determine what new products are developed.

6. Product designs are late, and development costs are over budget.

7. New products are designed in such a way that the cost of production exceeds budget.
Figure 15-11. New product development: Ideal flow.
early involvement of the field operations and marketing functions and continued review and control of the total process by a management group. The flow shown in Figure 15–11 was felt to be the best and only alternative with which to move forward.

**STEP 4. Determine Function Boundaries**

The objectives of Step 4 are to decide where the functional boundaries are to be drawn (reporting relationships determined) to maximize organization/system responsiveness and minimize the resources required.

Given the requirements of responsiveness and resource utilization, the best boundary fit to accomplish Ace Education’s new product development strategy was that shown in Figure 15–12. The old product development function was split, with the product conceptualization work to be accomplished by a new product design function and the product packaging work done by a new product engineering function. The new product design function combines with marketing and sales to form an integrated field operations unit. This grouping of functions or subsystems should facilitate faster decision-making regarding the design of products to meet customer needs. Likewise, the addition of product engineering to production and distribution to form a manufacturing unit will assist in the design of product packaging that can be manufactured at a reasonable price. The proposed new formal organization chart appears in Figure 15–13.

The result is a “functional” organization structure where the critical interfaces between functions has been articulated through the organization mapping process.

**STEP 5. Determine System or Organization Measures and Goals**

The redesign of an organization automatically means new expectations of all organization units. These expectations (in the form of measures and goals) must be supportive of the total system/organization requirements that triggered the redesign initially and must be formally specified for each function. A sample of key measures for Ace Education functions include:

**Marketing**

- New product proposals (actual vs. plan)
- New product sales performance, at 6 months, year 1, year 2 (actual vs. plan)
Figure 15-12. Redesign of Ace Education Company.
Figure 15-13. Revised organization chart of Ace Education Company.

Product Design
- Product design project
  - schedule (actual vs. plan)
  - design budget (actual vs. plan)
  - manufacturing cost (actual vs. plan)

Manufacturing
- Unit cost (actual vs. plan)
- Delivery (actual vs. plan)

STEP 6. Determine Function and Job Responsibilities, Measures, and Goals

Few organization redesigns formally go as far as Step 6. However, if you wish to be assured that your redesign will be implemented, it is wise to clarify new expectations this far down into the organization. One way to accomplish this is to have each function complete Steps 3–5 for jobs or units within the function.

Observations on the Redesign Process

Ace Education was redesigned following a straightforward process based on viewing both the structure and system flow dimensions of the organization.
Following are some observations about redesigning organizations relative to the process illustrated here:

**Step 4. Determine Function Boundaries** (the reporting relationships)

Step 4 is the most observable step in the process and frequently the only step carried out by an organization. There is no modeling of the redesign first and no establishment of system measures and goals to support the change.

**Step 5. Determine System or Organization Measures and Goals**

Step 5 is the glue that will hold the redesign in place. Chances are good that nothing will change for real if this step isn’t done.

**Step 6. Determine Function and Job Responsibilities, Measures, and Goals**

Step 6 is the way the redesign gets implemented throughout the organization. Given the basic process flow and organization structure, each function and subfunction can participate in the specification of its responsibilities and measures. Goal-setting should involve several levels of management to assure setting goals that will optimize the system.

**ORGANIZATION REDESIGN APPROXIMATIONS**

If achieving organization performance is critical, the best way to assure this happening is to change the organization structure: the reporting relationship and responsibilities in an organization, as described in this chapter. However, there are occasions when such an extensive change can’t be made, in which case there are two less extensive (and less effective) alternatives or approximations worth discussing.

The first alternative or approximation is some form of intervention that will improve the communications between individuals within the organization without changing the reporting relationship. The objective is to improve organization performance by improving people’s awareness of the total organization goal, the interdependence of functions, and the need for cooperation and communication.

Such interventions are popularly known as team-building. The intervention can be done at a somewhat abstract level where managers learn “trust” and their level of awareness of interdependence and the need for communication is raised through training and experiential exercises. However, the team-building can also be much more applied. One approach is to use the organization mapping process (system view of organizations) for team-building. In this instance, the team is composed of managers of functions that must work together to accomplish the same end. The process involves building a system map, identifying key links and current “disconnects,” evaluating the
impact of disconnects, and jointly prescribing what is required of all functions if the system is to work. This particular variation on team-building is important and effective because it requires completing the first two steps of the redesign process: (a) examination of the need for redesign, and (b) articulation of the necessary work process. The desired outcome is that the management team bridges or "overrides" the current work flow system and organization structure in order to achieve the organization performance goals.

We might attempt to meet the performance needs of Ace Education by doing team-building with the function managers. In the classic non-task-focused application of team-building, the assumption is that increased trust and communication between the managers will result in improving the product development and introduction process for Ace.

The more task-focused variation on team-building wherein the Ace managers jointly articulate (map) the product development and introduction process, identify current system disconnects, and develop strategies for improvement (as well as become aware of the interdependence of the functions), will have more immediate impact on organization performance.

The second alternative (or approximation) to a restructuring of an organization is to try to achieve the performance objective by modifying the measures and goals of each function—no change in boundaries, but rather a change in expectations/priorities. Ideally, Steps 1 and 2 of the redesign process would be completed before settling on the measures and goals.

This approach would require, at Ace Education, modifying the measures and goals of the functions key to new product development and introduction (marketing, sales, product development, etc.). Thus, the product development function would be measured on the cost-to-manufacture a new product (deviations from budget) as well as the cost of developing a new product and on-time completion of product design. To reiterate, this approach to improving organization performance can be more effective than the communication/interpersonal approach, but is still short of the effectiveness obtained by a reorganization if the reorganization follows the 6-step process described earlier. Of course, a combination of the team-building intervention with the modification of goals is also a reasonable approximation to a full reorganization.

**SUMMARY**

There are two dimensions along which an organization can be viewed—the structural or reporting relations view and the system (work flow) view. Both views are important to an effective redesign of an organization. The structural view reflects and communicates who is responsible to whom and for what in an organization. The system view provides a way to determine how the work is to get done by an organization and how the organization should be structured to optimize the described work/decision flow. These two views suggest the following process for organization redesign.
1. Analyze the need for a redesign.
2. Model the current organization as a system, showing the work that is done by all key functions.
3. Develop alternate models of the organizations system work flows (organization maps), reflecting acceptable work processes.
4. Determine function boundaries on the organization map to facilitate the information flow and decision-making to optimize work flow and resource utilization.
5. Determine system or organization measures and goals.
6. Determine function and job responsibilities, measures, and goals.

Frequently, the restructuring of an organization to improve organization effectiveness is not feasible. In that case, several approximations to an organization redesign may be helpful. Two are most notable: The first approximation to a redesign/restructure is to try to affect organization performance by carefully resetting the goals of organization units to achieve the total organization’s goals. The second approximation—with clearly less leverage than a redesign or changing unit goals—is to work with the individuals who staff the key function in an effort to increase their inclination and skill to communicate and work across functions. These endeavors are usually identified as team-building.

Organizations continually reorganize, frequently without much positive impact on organization performance. However, approaching the task of reorganization as an organization redesign task, setting specific organization goals and following a rational redesign process, can have powerful results. Done in such a way, organization redesign is an important and effective strategy for the performance technologist.

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Funk & Wagnalls (encyclopedia edition), s.v. “organization.”


Geary Rummler, in his chapter "Organization Redesign," does a laudable job of presenting the enormously useful concept of a systems view of organizational design. In addition, it provides a useful contrast to what organization design typically has meant. This chapter is exceptionally usable compared to most organization design literature. It could be given to anyone and used as a template for a redesign. For the practitioner who wishes to develop his skills in systems-based organization redesign, if time allows, I would recommend a gradual entry:

1. **Analysis.** Determine the performance issues that suggest redesign and then map the current organization. Don't change anything.

2. **Predict and Observe.** Still focusing on the current organization, predict some dynamics between elements that you would expect, and do the necessary investigation to find out whether they are true. If they are not, your map is probably incomplete or inaccurate. If the expected effects occur, then move to the next phase.

3. **Modify a portion.** Select a part of the work system represented by your map where you could make some changes without changing the entire system. As you develop alternative work flow models of the organization system, predict what the behavior of the system would be with that option. As you implement the one you choose, notice how the performance results confirm or violate your expectations. Adjust the design as necessary. Extract the lessons from this "pilot" that might be relevant to the overall organization design.

4. **Modify the whole system.** Building on wisdom garnered during analysis, prediction (without change), partial redesign, and adjustment, you
are ready to develop alternatives on the entire system using the process described by Rummler.

One of the advantages of this progression is that, in the absence of immediate requirement to reorganize, you can engage in Steps 1 and 2 without time pressure to proceed to Steps 3 and 4. As a result, a great deal of low-risk learning can occur which prepares you to better carry out the actual redesign.

A practice that has proven helpful in organization change efforts is the involvement of key organization members in the process so that they understand and “own” the redesign. Not only is this involvement crucial to getting accurate information, but it facilitates the adjustments and refinements that inevitably become necessary as the redesign is implemented.

I’d like to end on a note of caution. In the excitement of the potential performance impact that a systems-based organization redesign can have, there is the risk that one fails to respect the fact that current organization is the way it is for a reason. It may have been perfectly well suited to a past time but is now anachronistic; it may make sense in each of its parts but not as a whole. Your redesign will most likely improve organization performance, but the individuals in the organization are being asked to change from the devil known to the devil unknown. The earlier that they can see or experience a sample of the payoffs associated with the new design, the smoother the transition will be.
Introduction to Performance Technology

The International Society for Performance Improvement
Washington, D.C.
PLEASE NOTE: In an effort to more accurately reflect the myriad interventions of human performance technology and the varied skilled professionals that employ it, as well as reflect the Society's increasingly international membership, the National Society for Performance and Instruction (NSPI) changed its name in 1995 to the International Society for Performance Improvement (ISPI).

The mission of ISPI continues to be to improve the performance of individuals and organizations through the application of human performance technology. Moreover, ISPI will continue to be the preferred source of information, education, and advocacy for enhancing individual and organizational efficiency.

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